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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

AUG 5 2003

Russell F. Sawyer
Regulatory Affairs Manager
Nufarm Americas Inc.
Riverdale, a Nufarm Company
1333 Burr Ridge Parkway, Suite 125A
Burr Ridge, IL 60527-0866

Subject: Riverdale® Butoxy 2,4-D Low Volatile Ester
EPA Reg. No. 228-141
Amendment dated May 15, 2003

Dear Mr. Sawyer:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable provided the following change is made:

In the STORAGE AND DISPOSAL section, move the sentence "Do not contaminate water, food or feed by storage or disposal" out of the STORAGE section to a position immediately under the STORAGE AND DISPOSAL header.

One copy of the label stamped "Accepted with comments" is enclosed for your records. Please submit one copy of the final printed label before the product is released for shipment.

If you have any questions, please contact Robert Westin by phone at (703) 305-5721 or via email at westin.robert@epa.gov.

Sincerely,

A handwritten signature in cursive script that reads "Joanne I. Miller".

Joanne I. Miller
Product Manager (23)
Herbicide Branch
Registration Division (7505C)

Enclosure

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RIVERDALE®

BUTOXY

2,4-D LOW VOLATILE ESTER

ACTIVE INGREDIENT:

Butoxyethanol Ester of 2,4-Dichlorophenoxyacetic Acid* 62.2%

INERT INGREDIENTS: 37.8%

TOTAL 100.0%

Isomer Specific AOAC Method, Equivalent to:

*2,4-Dichlorophenoxyacetic Acid 42.8%, 3.84 lbs./gal.

Riverdale is a Registered Trademark of Riverdale - A Nufarm Company

KEEP OUT OF REACH OF CHILDREN

CAUTION - CAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the label, find someone to explain it to you in detail.)

SEE SIDE AND BACK PANELS FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS

NET CONTENTS GALS.

EPA REG. NO. 228-141

EPA EST. NO. 228-IL-1

MANUFACTURED BY NUFARM AMERICAS, INC., BURR RIDGE, ILLINOIS 60527-0866.

NOTE: Spanish Language is optional.

ACCEPTED with COMMENTS In EPA Letter Dated AUG 5 2003

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

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**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

CAUTION - CAUCION

Harmful if swallowed, inhaled or absorbed through skin. Avoid inhalation of vapors or spray mist and contact with skin, eyes and clothing. Remove saturated clothing as soon as possible and shower. If this container is over one gallon and less than five gallons, then persons engaged in open pouring of this product must also wear coveralls or a chemical resistant apron. If this container is five gallons or more in capacity, do not open pour product from this container. A mechanical system (such as a probe and pump or spigot) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal.

NON-WPS USES: Applicators and other handlers who handle this pesticide for any use NOT covered by the Worker Protection Standard (40 CFR Part 170) -- in general, only agricultural plant uses are covered by the WPS -- must wear face shield, goggles or safety glasses and chemical resistant gloves, long-sleeved shirt, long pants, socks and shoes when mixing, loading or applying this product or repairing or cleaning equipment used with this product. It is recommended that safety glasses include front, brow and temple protection. For aerial applicators in an enclosed cockpit and applicators applying this product from a tractor that has a completely enclosed cab, eye protection is not required. Wash hands, face and arms with soap and water as soon as possible after mixing, loading or applying this product. After work, remove all clothing and shower using soap and water. Do not reuse clothing worn during the previous day's mixing and loading or application of this product without cleaning first. Clothing must be kept and washed separately from other household laundry.

WPS USES: Personal Protective Equipment - Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category E on an EPA chemical resistance category selection chart. Applicators and other handlers who handle this pesticide for any use covered by the Worker Protection Standard (40 CFR Part 170) -- in general, agricultural plant uses are covered -- must wear long-sleeved shirt and long pants; chemical resistant gloves such as Barrier Laminate, Nitrile Rubber \geq 14 mils, Neoprene Rubber \geq 14 mils and Viton \geq 14 mils; shoes plus socks; and protective eyewear. Follow manufacturer's instructions for cleaning/maintaining Personal Protective Equipment (PPE). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. After each day of use, clothing or PPE must not be reused until it has been cleaned. If this container is over one gallon and less than five gallons, mixers and loaders who do not use a mechanical system (such as a probe and pump or spigot) to transfer contents of this container must wear coveralls or a chemical resistant apron in addition to the other required PPE.

Engineering Controls Statements: If this container is five gallons or more in capacity, do not open pour product from this container. A mechanical system (such as a probe and pump or spigot) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal. If the mechanical system is used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

FIRST AID STATEMENT

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Drift or runoff may adversely affect fish and non-target plants. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water maker. Vapors from this product may injure susceptible plants in the immediate vicinity. Use care to avoid spray contact or drift to 2,4-D susceptible plants such as cotton, tomatoes, flowers, grapes, fruit trees and ornamentals. Do not permit spray mist containing this product to drift onto them. Do not spray when the wind is blowing towards susceptible crops or ornamental plants. Use coarse sprays and/or low spray pressure to minimize drift. On cropland and along roadsides, do not exceed 20 psi pressure. Spray drift can be lessened by keeping the spray boom as low as possible, by spraying when wind velocity is low, and by stopping all spraying when wind exceeds 6 to 7 miles per hour. Do not use the same spray equipment for applying other materials to 2,4-D susceptible crops as injury may result. It is best to see a separate sprayer for application of insecticides and fungicides. Clean and rinse spray equipment using soap or detergent and water or suitable chemical cleaner, and rinse thoroughly before reuse for other spraying. Do not contaminate water when disposing of equipment washwaters. Do not apply this product through any type of irrigation system. Do not contaminate domestic or irrigation waters. Excessive amounts of this product in the soil may temporarily inhibit seed germination and plant growth.

Most groundwater contamination involving phenoxy herbicides such as 2,4-D have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination. When using on Pastures and Rangeland Grasses there is a (1) 7 day pregrazing interval for dairy cattle; (2) 30 day preharvest interval for grass cut for hay; and (3) 3 day pre-slaughter interval for meat animals.

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DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. READ ENTIRE LABEL BEFORE USING THIS PRODUCT. USE STRICTLY IN ACCORDANCE WITH LABEL PRECAUTIONARY STATEMENTS AND DIRECTIONS.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE is required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls, chemical resistant gloves such as Barrier Laminate, Nitrile Rubber \geq 14 mils, Neoprene Rubber \geq 14 mils and Viton \geq 14 mils; shoes plus socks, and protective eyewear.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

For Turf use, do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment areas until spray has dried.

GENERAL INFORMATION

This product is a low volatile ester especially prepared for use on crops and weeds where a susceptible crop in the near vicinity may be injured by a more volatile product. It is recommended for control of numerous broadleaf weeds and certain 2,4-D susceptible woody plants without injury to most established grasses. For best results, apply this product as a water or oil spray during warm weather when young, succulent weeds or brush are actively growing. Application under drought conditions often will give poor results. The lower recommended rates will be satisfactory on susceptible annual weeds. For perennial weeds and conditions such as the very dry areas of the Western states where control is difficult, the higher recommended rates should be used. Deep-rooted perennial weeds such as Canada thistle and Field bindweed and many woody plants usually require repeated applications for maximum control.

Unless otherwise directed, application rates should be 1 to 10 gallons of total spray by air or 5 to 25 gallons by ground application equipment. Higher gallonage may be used if desired to improve spray coverage. If band treatment is used, base the dosage rate on actual area to be sprayed. In either case, use the same amount of 2,4-D recommended per acre. Although water quantities may vary due to different types of application equipment, sufficient water must be used to provide for complete and uniform coverage. When product

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is used for weed control in crops, the growth stage of the crop must be considered. For crop uses, do not mix with oil, surfactants, or other adjuvants unless specifically recommended on label. To do so may reduce herbicide's selectivity and could result in crop damage.

Aerial applications should be used only when there is no danger of drift to susceptible crops. Many states have regulations concerning aerial application of 2,4-D formulations. Consult local regulatory authorities before making applications. Although this product is a low volatile formulation, temperatures above 90°F vapors may damage susceptible crops growing nearby.

Riverdale Butoxy 2,4-D Low Volatile Ester is especially prepared for use on crops and weeds where a susceptible crop in the near vicinity may be injured by a more volatile product.

SOME WEEDS READILY KILLED DURING EARLY STAGES OF GROWTH

ANNUALS

Beggarticks	Kochia
Black medic	Marshelder
Butter print	Mustards
or Velvetleaf	Pigweeds
Cocklebur	Puncture vine
Fanweed	Ragweed
Hemp (marijuana)	Sunflower (annual)

PERENNIALS

Hedge bindweed	Healall
Buckhorn	Nettle, stinging
Bull thistle	Lawn pennywort
Burdock	Plantains
Chickweed	Sunflower
mouseear	(perennial)
Dandelion	Vervains
	Vetch

TREATMENT IN CORN AND SORGHUM - Use from 1/2 to 1 pint Riverdale Butoxy 2,4-D Low Volatile Ester with recommended amounts of water to make per acre applications. Time of application should be determined by weed growth with the ideal time after emergence of majority of weeds but before they have damaged the crop. The crop is most sensitive when growing fast and temperatures and moisture favorable for plant growth. As a general rule, the crop is less susceptible from 3 inches up to 10 inches. Use drop nozzle when corn or sorghum is over 10 inches tall. Do not apply from tasseling to dough stage.

TREATMENT IN SMALL GRAINS - WHEAT, OATS, BARLEY AND RYE - Use from 1/2 to 1 pint Riverdale Butoxy 2,4-D Low Volatile Ester with recommended amounts of water to make per acre applications for ground equipment and airplane application. Good results have also been obtained with airplane application using diesel oil as the diluent instead of water. Make application after the crop is fully tillered until jointing is under way. Stop treatment before boot stage is reached. Spraying in small grain is frequently desirable after the crop has reached the milk stage. At such time annual and perennial weeds often interfere with harvesting and produce seeds which lower quality of threshed grain. Under such conditions use from 1 to 1-1/2 pints Riverdale Butoxy 2,4-D Low Volatile Ester with recommended amounts of water to make per acre applications. Ground equipment will cause some mechanical damage to the crop. When applying with plane, use dosage in 2 to 3 gallons diesel oil.

GENERAL BROADLEAF CONTROL ON PASTURES AND ON NON-CROPPED LAND - Do not apply to clover or newly seeded pastures. The rates of applications for pastures and rangelands are per acre per application per site.

ANNUAL WEEDS - Most annual broadleaf weeds can be controlled with 1 to 1-1/2 pints in 50 to 100 gallons of water per acre. Make application when weeds are young and actively growing.

New seedings of grass should not be treated until they are well established. For controlling annual weeds in farm yards, fence rows along highways and similar locations, use 1 quart in 5 to 10 gallons water per acre. Possible injury may occur to bentgrass St. Augustinegrass and clover.

PERENNIAL WEEDS - Many of the perennial weeds in pastures, including ironweed, vervain and asters are moderately tolerant to 2,4-D. For control of these type weeds, use 1 quart Riverdale Butoxy 2,4-D Low Volatile Ester in 5 to 10 gallons water per acre. Make application not later than the bud stage and repeat treatment the following season.

Local conditions may affect the use of this chemical. Consult State Agricultural Extension or Experiment Station weed specialists for specific recommendations for local weed problems and for information on possible lower dosages.

STORAGE AND DISPOSAL

STORAGE: Always use original container to store pesticides in a secured warehouse or storage building. Containers should be opened in well ventilated areas. Keep container tightly sealed when not in use. Do not stack cardboard cases more than two pallets high. Do not store near open containers of fertilizer, seed or other pesticides. Do not contaminate water, food or feed by storage or disposal.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixtures, or rinsate is a violation of Federal law and may contaminate groundwater. If container is damaged or if pesticide has leaked, contain all spillage. Absorb and clean up all spilled material with granules or sand. Place in a closed labeled container for proper disposal. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

WARRANTY

Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures and other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the seller. Buyer assumes all risk of use, storage or handling of this material not in strict accordance with directions given herewith.

(RV 051503)